Forestry

Bachelor of Science degree with a major in Forestry — with concentrations in:
- Forest Hydrology
- Forest Operations
- Forest Restoration
- Forest Soils
- Tribal Forestry
- Wildland Fire Management

Minor in Fire Ecology
Minor in Forestry
Minor in Watershed Management

See Natural Resources for details on the Master of Science degree.

Department Chair
David F. Greene Ph.D.

Department of Forestry and Wildland Resources
Forestry Building 205
707-826-3935
fwr.humboldt.edu

The Program
Students completing this program will have demonstrated:
- Understanding of taxonomy, autecology of trees, plant and wood identification; physiology of trees; ecological concepts, ecosystem processes, structure and function; soil formation, classification, composition and properties; silvicultural principles, stand structure and composition; growth and quality of forests and forest health; fire ecology and use of fire; entomology and pathology; wildlife and fish ecology; plant, soil, water interactions, watershed processes, land measurement, mapping, photogrammetry, remote sensing; sampling theory and methods, statistical literacy, measurement of trees, forests, and forest products; wildlife habitat assessment; measurement of water yields and quality; assessment of non-timber forest values; integrated forest management, multiple-use principles; stand scale management; system and landscape management; forest engineering and road design; harvesting systems; utilization; policy development, sociological influences; administration, environmental regulation; land and resource planning; budgeting, finance, personnel management, cost, and economics
- Capable practice of critical thinking; writing; quantitative thinking; public speaking, debate and persuasion; leadership; group cooperation; conflict resolution; time management; professional integration; independent life-long learning; computer literacy and skills
- The attributes of adaptability; integrity; open-mindedness; professional decorum.

Humboldt State University is located in the heart of the coast redwood forest. This environment provides outdoor classrooms for more than half of the forestry courses. Field trips illustrate lecture concepts and teach field techniques.

Excellent on-campus laboratories complement the outdoor lab. Students have access to the college forest, the Schatz Tree Farm, public and private forest lands, and various production centers. Because Humboldt County also has a large forest products industry, Humboldt State is an excellent place to study the resolution of environmental issues with economic concerns.

Students and faculty interact with professional forest managers and researchers of the region both in the classroom and in the field.

Forestry is an incorporative discipline, drawing from the biological, physical, social, and managerial sciences. The curriculum aids in understanding the biological complexities of the forest and the interactions between the forest and social and economic demands.

The program provides sufficient background and depth of education to give a sound basis for professional growth within a broad range of forestry-related careers. Our graduates often start as forest rangers, park rangers, fire fighters, timber cruisers, or surveyors. Some hold staff positions in the federal and state agencies, forest products industry, or with environmental organizations. Graduates go on to build careers in: wildland fire management, forest management, forest protection, park management, watershed management, forest biology, forest engineering, industrial management, resource planning, forest restoration, and research and education.

Visit our webpage at fwr.humboldt.edu.

Preparation
In high school, take a broad background, Biological/physical sciences, mathematics, social sciences, and the arts are helpful.

Requirements for the Major
For a description of degree requirements to be fulfilled in addition to those listed below for the major, please see “The Bachelor’s Degree” section of the catalog, pp. 67-82. “The Master’s Degree” on page 83.

Unit Requirements
Core units
- 64
Concentration units:
- 28-31
Total units in the major:
- 92-95
Total units required for the degree:
- 120

Special Grade Requirement
Students must complete all courses in the major with a C- or better.

Core Courses (64 units)
The following core courses are required for all forestry majors.

Lower Division
Complete at least one course in a basic biological science that meets general education requirements and is comparable to:
- BOT 105 (4) General Botany

Complete at least one course in a basic physical science that meets general education requirements and is comparable to:
- CHEM 107 (4) Fundamentals of Chemistry

Complete the following:
- ESM 105 (3) Natural Resource Conservation
- FOR 130 (3) Dendrology
- FOR 210 (4) Forest Measurements and Biometry
- FOR 222 (2) Forest Health and Protection
- FOR 223 (2) Intro to Wildland Fire Operations
- FOR 250 (3) Intro to Forest Operations
- GSP 101 (2) Geospatial Concepts,
- GSP 101L (1) Geospatial Concepts Lab
- SOIL 260 (3) Intro to Soil Science
- STAT 108 (3) Elementary Statistics, or
- STAT 108i (3) Elementary Statistics with Integrated Support [Coreq: STAT 8]

Take all lower division courses before beginning upper division work.

Upper Division
- ESM 305 (3) Environmental Conflict Resolution
- FOR 311 (4) Forest Mensuration & Growth
- FOR 331 (3) Silvics — Foundation of Silviculture
- FOR 365 (4) Forest Financial Administration
Concentrations
Complete one concentration to fulfill the requirements of the major.

**Forest Hydrology Concentration (29 units)**
See core courses.

**Lower Division**
- MATH 105 [3] Calculus for the Biological Sciences & Natural Resources

**Upper Division**
- FOR 471 [3] Forest Administration & Ethics
- SOIL 467 [3] Intro to Agroforestry
- WSHD 333 [3] Wildland Water Quality, or

This program meets the qualifications for “Forester” in federal employment.

**Forest Operations Concentration (29 units)**
See core courses.

**Lower Division**

**Upper Division**

**Forest Restoration Concentration (29 units)**
See core courses.

**Lower Division**

**Upper Division**
- FOR 471 [3] Forest Administration & Ethics

**Complete one of the following courses.**
- WSHD 458 [3] Climate Change & Land Use

This program meets the qualifications for “Forester” in federal employment.

**Forest Soils Concentration (28 units)**
See core courses.

**Lower Division**
- FOR 471 [3] Forest Administration & Ethics

**Complete two of the following courses.**
- SOIL 462 [3] Soil Fertility

This program meets the qualifications for “Forester,” “Soil Scientist,” and “Soil Conservationist” in federal employment.

**Tribal Forestry Concentration (31 units)**
See core courses.

**Lower Division**
- NAS 104 [3] Introduction to Native American Studies
- GSP 216 [3] Intro to Remote Sensing, or

**Upper Division**
- FISH 300 [3] Intro to Fishery Biology
- NAS 361 [3] Tribal Sovereignty, Tribal Citizens, or
- NAS 468 [3] Tribal Justice Systems, or
- NAS 325 [3] Native Tribes of California

This program meets the qualifications for “Forester” in federal employment.
### Forestry Minor

**Total units required for the minor:** 16

**Required courses**

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<td>FOR 315</td>
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*Complete one of the following four courses.*

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<td>FOR 302</td>
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### Watershed Management Minor

See Watershed Management

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### Forestry Minor

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### Wildland Fire Management Concentration (29 units)

*See core courses.*

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<tr>
<td>GSP 216</td>
<td>(3) Intro to Remote Sensing</td>
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<td>GSP 270</td>
<td>(3) Geographic Information Science (GIS)</td>
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**Upper Division**

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<tr>
<td>FISH 300</td>
<td>(3) Intro to Fishery Biology, or RRS 306</td>
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<tr>
<td>RRS 306</td>
<td>(3) Wildland Resource Principles</td>
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<td>FOR 321</td>
<td>(3) Fire Ecology</td>
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<td>FOR 323</td>
<td>(3) Wildland Fire Behavior &amp; Use</td>
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<tr>
<td>FOR 423</td>
<td>(3) Wildland Fuels Management</td>
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<td>FOR 424</td>
<td>(3) Wildland Fire Internship</td>
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<td>FOR 471</td>
<td>(3) Forest Administration &amp; Ethics</td>
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<td>FOR 476</td>
<td>(2) Advanced Forest Management</td>
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<tr>
<td>FOR 431</td>
<td>(3) Forest Restoration</td>
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<tr>
<td>FOR 475</td>
<td>(3) Forest Management Decision Making</td>
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<td>GSP 370</td>
<td>(3) Intermediate Geographic Information Science (GIS)</td>
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### REQUIREMENTS FOR THE MINORS

### Fire Ecology Minor

**Total units required for the minor:** 15

**Required Courses**

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### Watershed Management Minor

See Watershed Management